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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,424	12/10/2003	Makoto Oikawa	1232-5227	2119
27123 7590 01/10/2008 MORGAN & FINNEGAN, L.L.P. 3 WORLD FINANCIAL CENTER NEW YORK, NY 10281-2101			EXAMINER KHAN, USMAN A	
			ART UNIT 2622	PAPER NUMBER
			NOTIFICATION DATE 01/10/2008	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/733,424

Applicant(s)

OIKAWA, MAKOTO

Examiner

Usman Khan

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 December 2003 and 24 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/03/2007 has been entered.

Response to Arguments

Applicant's arguments filed on 11/01/2007 with respect to claims 1 – 3 have been considered but are moot in view of the new ground(s) of rejection. Also, newly added claim 5 is rejected on the grounds of rejections provided.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 - 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over background teachings of Sasakura (US patent No. 5,995,144) in further view of Examiners Official Notice.

Regarding **claim 1**, Sasakura teaches that it is well known in the art to have a focus detection device comprising: a solid-state image sensing device including a first photoelectric conversion element array which photoelectrically converts a first light beam passing through a first area of an exit pupil of a photographing optical system (figure 2 and column 1 liens 26 *et seq.*), and a second photoelectric conversion element array which photoelectrically converts a second light beam passing through a second area of the exit pupil which is different from the first area (figure 2 and column 1 liens 26 *et seq.*); and a computing device which detects a focus state of the photographing optical system by computing a correlation between a first image signal which is an image signal from the first photoelectric conversion element array and a second image signal (Figure 4; column 2 lines 28 *et seq.*) which is an image signal from the second photoelectric conversion element array in accordance with a position of a focus detection area in an image sensing frame on the basis of a ratio between a shift amount of a focus detection opening pupil from an optical axis (figures 3 and 4; column 2 lines 28 *et seq.* also it is inherent that the light inputted will be limited by the pupil), caused by being limited by an exit window of the photographing optical system (it is inherent that the light inputted will be limited by the pupil), and a width of the focus detection opening pupil (it is inherent that the shifted light will be limited by the pupil).

However, Sasakura fails to teach that the first and the second image signals are each shading-corrected image signals.

The examiner takes Official Notice that it is old and well known in the art to have shading-corrected image signals used in a focus detection device.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate shading-corrected image signals in Sasakura invention to improve image quality; to change characteristics of the light source, without sacrificing productivity; to produce high quality images; for noise reduction, thereby preventing degradation of image quality; and to prevent generation of black lines and improve reading quality.

Regarding **claim 2**, Sasakura teaches that it is well known in the art to have a focus detection method wherein a first light beam passing through a first area of an exit pupil of a photographing optical system is photoelectrically converted by a first photoelectric conversion element array (figure 2 and column 1 lines 26 *et seq.*), a second light beam passing through a second area of the exit pupil which is different from the first area is photoelectrically converted by a second photoelectric conversion element array (figure 2 and column 1 lines 26 *et seq.*), and a focus state of the photographing optical system is detected by computing a correlation between a first image signal which is an image signal from the first photoelectric conversion element array and a second image signal which is an image signal from the second photoelectric conversion element array (Figure 4; column 2 lines 28 *et seq.*) in accordance with a position of a focus detection area in an image sensing frame on the basis of a ratio between a shift amount of a focus detection opening pupil from an optical axis (figures 3 and 4; column 2 lines 28 *et seq.* also it is inherent that the light inputted will be limited by the pupil), caused by being limited by an exit window of the photographing optical

system (it is inherent that the light inputted will be limited by the pupil), and a width of the focus detection opening pupil (it is inherent that the shifted light will be limited by the pupil).

However, Sasakura fails to teach that the first and the second image signals are each shading-corrected image signals.

The examiner takes Official Notice that it is old and well known in the art to have shading-corrected image signals used in a focus detection device.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate shading-corrected image signals in Sasakura invention to improve image quality; to change characteristics of the light source, without sacrificing productivity; to produce high quality images; for noise reduction, thereby preventing degradation of image quality; and to prevent generation of black lines and improve reading quality.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over background teachings of Sasakura (US patent No. 5,995,144) in further view of Examiners Official Notice in further view of Sasakura (US patent No. 5,995,144).

Regarding **claim 3**, Sasakura teaches that it is well known in the art to have a focus detection method wherein a first light beam passing through a first area of an exit pupil of a photographing optical system is photoelectrically converted by a first photoelectric conversion element array (figure 2 and column 1 lines 26 *et seq.*), a second light beam passing through a second area of the exit pupil which is different

from the first area is photoelectrically converted by a second photoelectric conversion element array (figure 2 and column 1 lines 26 *et seq.*), and a focus state of the photographing optical system is detected by computing a correlation between a first image signal which is an image signal from the first photoelectric conversion element array and a second image signal which is an image signal from the second photoelectric conversion element array (Figure 4; column 2 lines 28 *et seq.*) in accordance with a position of a focus detection area in an image sensing frame on the basis of a ratio between a shift amount of a focus detection opening pupil from an optical axis (figures 3 and 4; column 2 lines 28 *et seq.* also it is inherent that the light inputted will be limited by the pupil), caused by being limited by an exit window of the photographing optical system (it is inherent that the light inputted will be limited by the pupil), and a width of the focus detection opening pupil (it is inherent that the shifted light will be limited by the pupil).

However, Sasakura fails to teach that the first and the second image signals are each shading-corrected image signals.

The examiner takes Official Notice that it is old and well known in the art to have shading-corrected image signals used in a focus detection device.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate shading-corrected image signals in Sasakura invention to improve image quality; to change characteristics of the light source, without sacrificing productivity; to produce high quality images; for noise

reduction, thereby preventing degradation of image quality; and to prevent generation of black lines and improve reading quality.

However, the background teachings of Sasakura in further view of Examiners Official Notice fails to disclose a computer program recorded on a computer-readable medium for causing a computer to execute a focus detection method.

Sasakura, on the other hand discloses a computer program recorded on a computer-readable medium for causing a computer to execute a focus detection method.

More specifically, Sasakura discloses in column 4 lines 25 – 37 and in column 5 line 65 – column 6 line 28 that the focus detection method operation controls are sent from a medium to a processor for focusing and correcting.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Sasakura with the background teachings of Sasakura in further view of Examiners Official Notice to free the resources in the E²PROM as taught in column 5 line 51 – column 6 line 28.

Claim 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over background teachings of Sasakura (US patent No. 5,995,144) in further view of Examiners Official Notice in further view of Kaneda (US PgPub 2002/0101531).

Regarding **claim 5**, as mentioned above in the discussion of claim 1, Sasakura in further view of Examiners Official Notice teaches all of the limitations of the parent claim.

However, Sasakura in further view of Examiners Official Notice fails to disclose that the information utilized to create the shading-corrected image signal is obtained from a digital memory in a photographing lens. Kaneda, on the other hand teaches that the information utilized to create the image signal is obtained from a digital memory in a photographing lens.

More specifically, Kaneda teaches that the information utilized to create the shading-corrected image signal is obtained from a digital memory in a photographing lens (Abstract and paragraphs 0086 - 0094 and 0121 *et seq.* memory inside lens and the shading-corrected image signal will be created when combined with Sasakura in further view of Examiners Official Notice).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kaneda with the teachings of Sasakura in further view of Examiners Official Notice to reduce the size of the camera unit and also to have cost reduction of the camera memory since the lens memory will hold lens information freeing up the camera memory. Also, in paragraph 0085 Kaneda teaches using the invention one can enable appropriate images to be efficiently recorded on the side of the imaging apparatus according to various performances of the imaging lens apparatus.

Claim 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over background teachings of Sasakura (US patent No. 5,995,144) in further view of Examiners Official Notice in further view of Kawasaki et al. (US patent No. 5,349,409).

Regarding **claim 5**, as mentioned above in the discussion of claim 1, Sasakura in further view of Examiner's Official Notice teaches all of the limitations of the parent claim.

However, Sasakura in further view of Examiner's Official Notice fails to disclose that the information utilized to create the shading-corrected image signal is obtained from a digital memory in a photographing lens. Kawasaki et al., on the other hand teaches that the information utilized to create the image signal is obtained from a digital memory in a photographing lens.

More specifically, Kawasaki et al. teaches that the information utilized to create the shading-corrected image signal is obtained from a digital memory in a photographing lens (Abstract and column 1 lines 21 *et seq.* and column 2 lines 27 *et seq.* variable lens data memory in lens and the shading-corrected image signal will be created when combined with Sasakura in further view of Examiner's Official Notice).


Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kawasaki et al. with the teachings of Sasakura in further view of Examiner's Official Notice because in column 2 lines 20 – 42 Kawasaki et al. teaches that using the invention provides provide a photographing lens in which lens data corresponding to various photographing conditions can be stored in a small memory thereby reducing cost and size of the system.

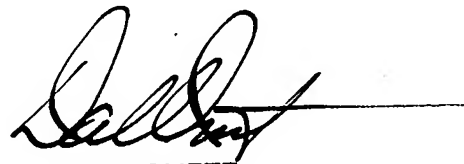
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Usman Khan whose telephone number is (571) 270-1131. The examiner can normally be reached on Mon-Thru 6:45-4:15; Fri 6:45-3:15 or Alt. Fri off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Usman Khan
12/31/2007
Patent Examiner
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